

**Revision of the Neotropical spider  
genus *Dyrines* (Araneae,  
Lycosoidea, Trechaleidae)**

**James E. Carico:** School of Sciences, Lynchburg College, 1501 Lakeside Drive, Lynchburg, Virginia 24501, USA. E-mail: carico@lynchburg.edu

**Estevam Luís Cruz da Silva:** Pontifícia Universidade Católica do Rio Grande do Sul, Laboratório de Aracnologia, Av. Ipiranga, 6681, prédio 12C, sala 244, CEP 90619-900, Porto Alegre, RS, Brazil

**Abstract.** The genus *Dyrines*, is revised for the first time since Simon provided the name in 1903 to replace the preoccupied *Drances*. A female lectotype is designated for the type species, *Dyrines striatipes* (Simon 1898), which is redescribed and illustrated. The holotype of *D. taeniatus* Mello-Leitão 1943 is a tiny spiderling and is considered a *nomen dubium*. *Dyrines lineatipes* Petrunkevitch 1925 is regarded as a junior synonym of *D. striatipes*. *Dyrines rubrosignatus* Mello-Leitão 1943 is transferred to the genus *Thaumasia*, resulting in *Thaumasia rubrosignata* (Mello-Leitão 1943b), new combination. Two new species are described and illustrated: *D. huamuco* from Huanuco, Peru, and *D. ducke* from Reserva Florestal Adolfo Ducke near Manaus, Brazil.

**Keywords:** South America, new species, taxonomy, morphology

The name *Dyrines* was provided by Simon (1903) for a genus he described as *Drances* (1898a) because the latter was preoccupied in Coleoptera. In this work we have revised the genus for the first time. Species of this monophyletic genus are small, delicate, rather pale and without distinctive patterns except for the rather distinctive five or less dark, longitudinal lines on the legs and pedipalpi. Based on our survey of the collections as potential sources of material, specimens are relatively rare. Since they are among the smallest examples in a family better known for having very large species, e.g., *Trechalea* Thorell 1869, and seem atypical for the family, it is possible that specimens have been sorted to other genera or perhaps other families. We hope that this generic review will provide the basis for workers to identify specimens so that we might have more material in order to learn the extent of their diversity and develop an understanding of their biology.

#### METHODS

Specimens were loaned from the following museums: American Museum of Natural History, New York (AMNH), Muséum National d'Histoire Naturelle, Paris (MNHN), Museu Nacional, Universidade Federal do Rio de Janeiro (MNRJ), Peabody Museum of Natural History, Yale University, New Haven, Connecticut (PMNH); California Academy of Sciences, San Francisco (CAS), Museu de Ciências e Tecnologia, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil (MCTP).

Abbreviations: AE, anterior eyes, or length of anterior eye row; ALE, anterior lateral eyes; AME, anterior median eyes; OQA, anterior part of ocular quadrangle, or length of line composed of anterior median eyes; OQH, ocular quadrangle height, or length of a line composed of anterior median eye and posterior median eye; OQP, posterior part of ocular quadrangle, or length of line composed of posterior median eyes; PE, posterior eyes, or length of posterior eye row; PLE, posterior lateral eyes; PME, posterior median eyes.

All measurements are in millimeters. Following critical point drying, the scanning electron micrograph (SEM) of the specimen was made with a Philips XL 30 scanning electron microscope in the Centro de Microscopia e Microanálises of Pontifícia Universidade Católica do Rio Grande do Sul.

#### TAXONOMY

##### Family Trechaleidae Simon 1890

**Diagnosis.**—The spider family Trechaleidae was diagnosed by Silva et al. (2008), as follows: eyes arranged in two rows, presence of a tibial apophysis and a ventrodorsal refolded rim on male palpal tibia; male palpus with a large median apophysis with a dorsal embolic groove extending into the guide; female epigynum generally heavily sclerotized, dark and opaque, the epigynal plate is conspicuous and the anterior field wide and usually distinct from the lateral lobes and the female builds a discoid and flattened egg sac, fixed and carried on the spinnerets (Carico 1993).

##### Genus *Dyrines* Simon 1903

*Drances* Simon 1898a:314 (junior homonym of *Drances angustatus* Champion 1889 (Coleoptera)).

*Dyrines* Simon 1903:1045 (replacement name for *Drances* Simon 1898a); Roewer 1954:136; Bonnet 1956:1615; Lehtinen 1967:372; Carico 1986:305; Sierwald 1990:51; Carico 1993:226; Sierwald 1993:63; Carico 2005:785; Platnick 2008.

**Type species.**—*Drances striatipes* Simon 1898b, by original designation.

**Diagnosis.**—Metatarsi and tarsi of the legs are straight and not bent and flexible as in some other relatively familiar trechaleid genera, i.e., *Trechalea* and *Hesyrdrns*. Males and females are distinguished from all other genera, except *Paradossemis* F.O. Pickard-Cambridge 1903, by the length of leg I which is about twice the length of leg III. Further, the legs share with no other genus the distinct longitudinal dark lines on the legs reducing in number towards apical segments.

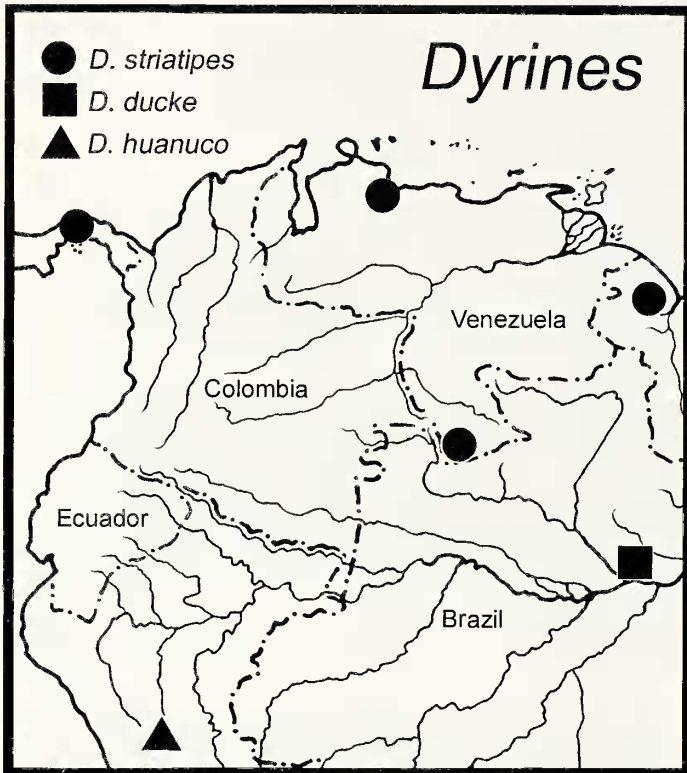


Figure 1.—Distribution of species of *Dyrines*.

The median apophysis of the male palpus lacks a ventral division and the guide is uniquely directed prolaterally (Fig. 2) rather than retrolaterally as in all other genera. The female epigynum is variable but with a distinct, posteriorly located, middle field (Fig. 6). *Dyrines* expresses the principal characteristics of the family Trechaleidae; especially the basic architecture of the male palpus (Carico 1993).

**Description.**—Carapace moderately high, length 1.9–2.4, cephalic area not distinct, AE row straight. Sternum unmarked. Basal elements of chelicerae promarginal teeth three with center one largest, three retromarginal teeth variable in size and spacing. Legs straight with III always smallest and I longest with the length about twice length of III; all legs and pedipalpi pale with 4–1 distinct dark, longitudinal pigmented lines.

Palpal bulb of male with large median apophysis, ventral division absent, dorsal division with the guide arising first retrolaterally but curving prolaterally; tibia distinctly shorter than cymbium, ectal division of retrolateral apophysis with small point arising from the tibial ventral rim, ental division arising very close to the cymbium and variable (Fig. 2). Female epigynum variable but with distinct, posteriorly located, middle field (Figs. 6, 10, 14).

**Distribution.**—Species of this genus are found from Panama southward into South America to northern Peru in the west and to Guyana and the central Amazon River Basin in the east (Fig. 1).

*Dyrines striatipes* (Simon 1898)

Figs. 1, 4–7

*Drances striatipes* Simon 1898b:18.

*Dyrines striatipes* (Simon): Simon 1903:1045; Petrunkevitch 1925:543; Roewer 1954:136; Bonnet 1956:1615; Sierwald 1990:33; Platnick 2008.

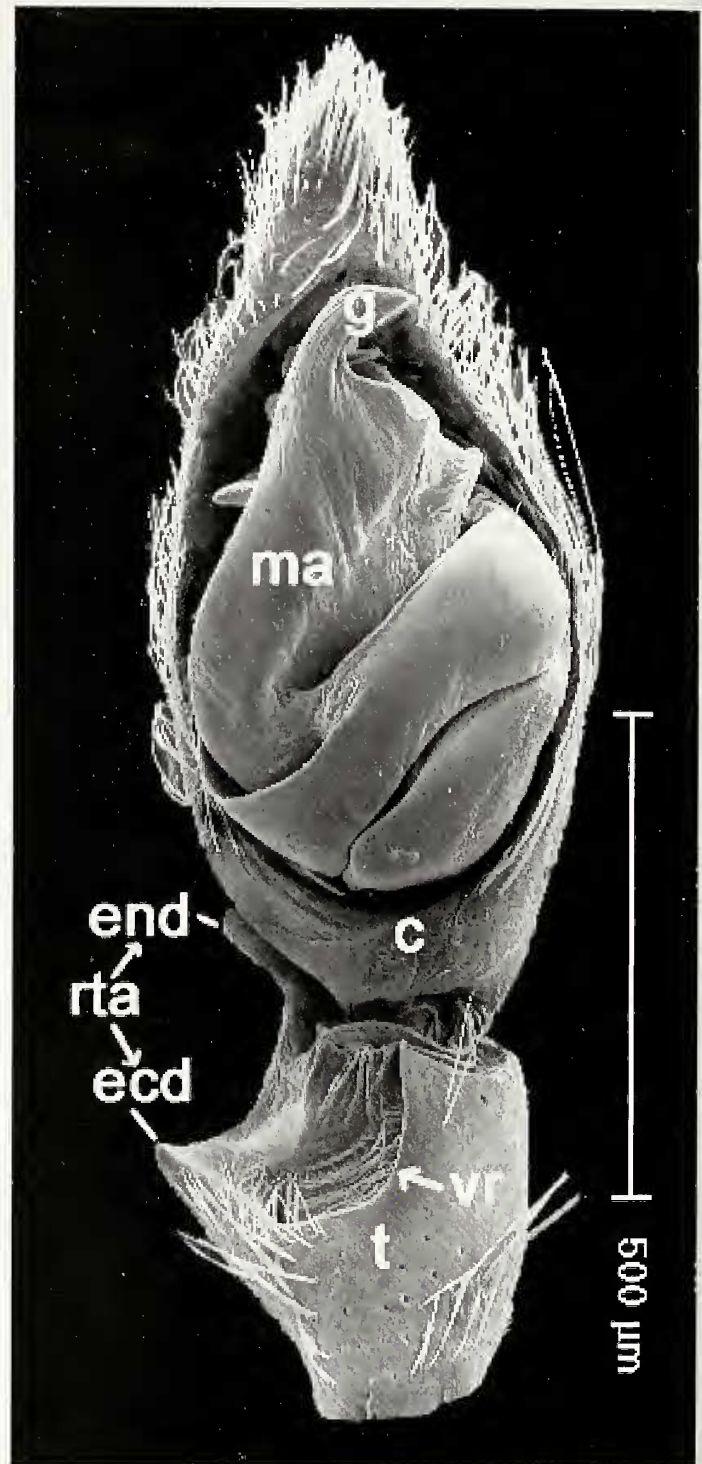
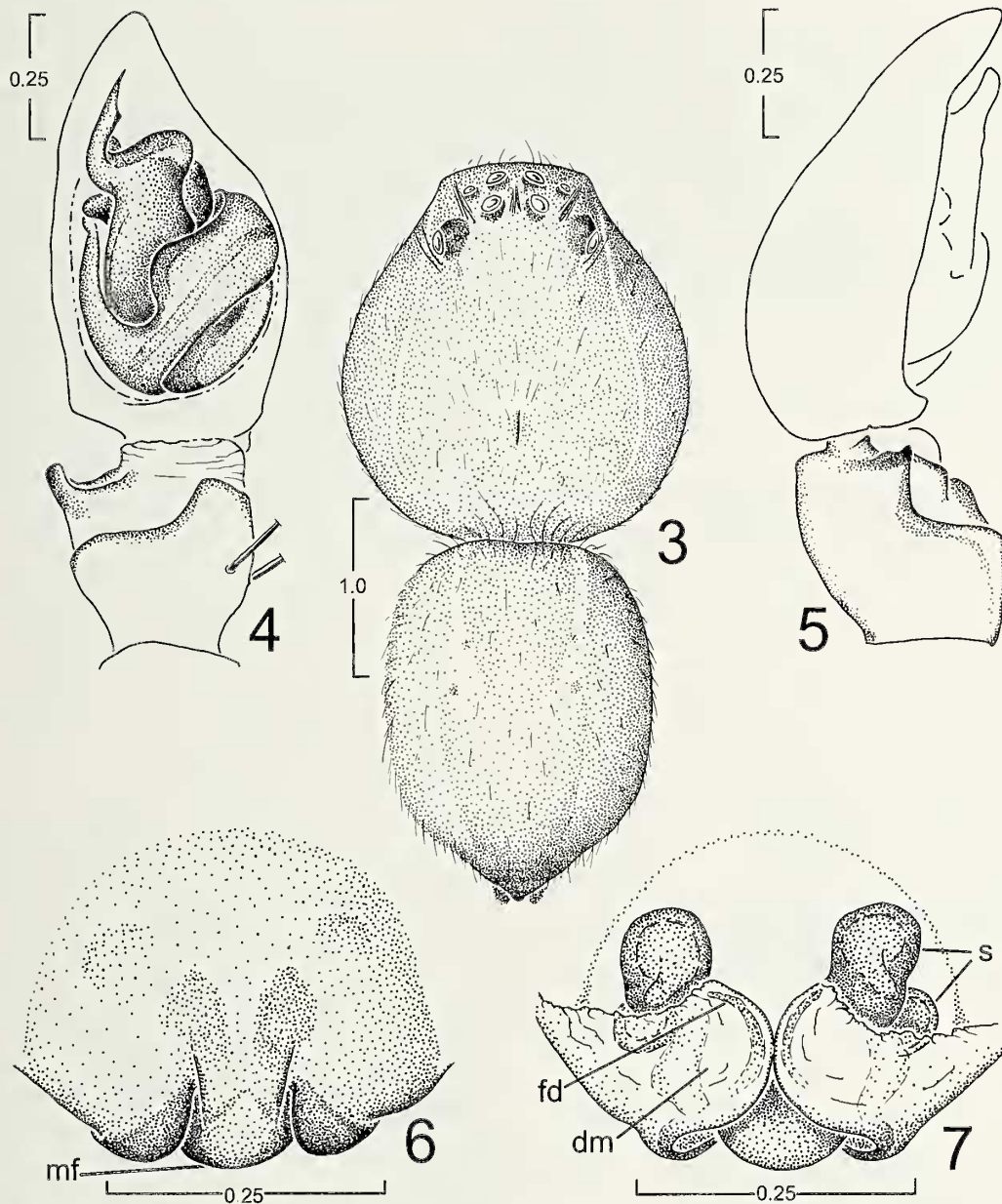


Figure 2.—*Dyrines ducke*, paratype, male palpus, ventral view. Abbreviations: c, cymbium; ecd, ectal division of retrolateral apophysis (rta); end, ental division of rta; g, guide; ma, median apophysis.

*Dyrines lineatipes* Petrunkevitch 1925:166, figs. 86, 87. Platnick 2008. NEW SYNONYMY.

**Material examined.**—*Drances striatipes*: female lectotype (present designation), VENEZUELA: Carabobo: San Esteban, Venezuela (10° 24'N, 068° 05'W) (MNHN). Paralectotypes: 1



Figures 3-7.—*Dyrines striatipes*: 3. Dorsal pattern of paralectotype male; 4. Right palpus, paralectotype male, ventral view; 5. Same, retrolateral view; 6. Female genitalia, lectotype, ventral view; 7. Same, dorsal view. Abbreviations: dm, dorso-lateral membrane; fd, fertilization duct of female epigynum; mf, middle field of epigynum; s, spermathecae.

male, 1 female, 1 immature male, same data as lectotype (MNHN).

*Dyrines lineatipes*: male holotype PANAMA: Veraguas: San Lorenzo, Chiriquí, Wilcox Camp (08°18'N, 82°06'W), 12 April 1924, A. & W. Petrunkevitch (PMNH, examined).

*Other material*: GUYANA: Essequibo: 2 ♂, 2 ♀, Shudicar River, upper Essequibo River (07°02'N, 058°27'W), 1 January 1938, W.G. Hassler (AMNH). VENEZUELA: Amazonas: 1 ♂, Rio Yaciba, 1.5 days above junction with Rio Yatua (01°29'02"N, 066°31'37"W), 6 December 1953, anonymous (AMNH).

**Diagnosis.**—The guide of the median apophysis of the male pedipalp differs from the other species of *Dyrines* in that it narrows apically (Fig. 4). The ental division of the retrolateral tibial apophysis is small and indistinct, a character that it

shares with *D. huanuco* (Fig. 9) but differs from *D. ducke* (Fig. 13). Externally, the median division of the female epigynal plate is broadly and smoothly connected to the remainder of the epigynal plate, and posteriorly forms the middle portion of the epigastric rim (Fig. 6). Internally, the curved fertilization ducts (fd) are only similar to that of *D. huanuco* (Fig. 11), but differ from *D. ducke* (Fig. 15) in that they form an arc arising near the posterior epigynal rim, curving and touching medially and continuing antero-laterally while creating broad, thin, dorsal membranes (dm) laterally (Fig. 7).

**Description.**—*Paralectotype male*: Carapace (Fig. 3) pale with lateral, thin, light, longitudinal lines each side, black around each eye, length 2.12, width 1.84. Sternum: length 1.00, width 1.12; labium length 0.35, width 0.35. Clypeus unmarked,

height 0.11, width 0.86. Eyes: AE 0.65, PE 1.04, OQA 0.35, OQP 0.47, OQH 0.37, PLE 0.17, PME 0.16, ALE 0.10, AME 0.14, PLE-PME 0.18, PME-PME 0.11, ALE-AME 0.06, AME-AME 0.07. Chelicerae each with two indistinct dark longitudinal lines, one anterior and one lateral; grooves and carinae absent; three promarginal teeth, three retromarginal teeth with distal one largest and more distant. Legs, segment lengths: femur, patella-tibia, metatarsis, tarsus, total: I -3.48, 4.64, 4.12, 1.41, 13.64; II - 2.48, 3.08, 2.52, 0.96, 9.04; III - 1.72, 1.84, 1.72, 0.68, 5.72; IV -2.52, 2.92, 3.20, 0.88, 9.52; tibial ventral macrosetae pairs: I-5, II-5, III-1, IV-3. Pedipalpi with longitudinal dark lines. Abdomen (Fig. 3) pale with faint dorsal longitudinal lines anteriorly. Guide of median apophysis of male palpal bulb (Figs. 4, 5) is narrow and acute apically; retrolateral tibial apophysis with small, indistinct ental division.

*Lectotype female:* Carapace pale with lateral, thin, light, longitudinal lines each side, black around each eye, pencils of white setae in eye region directed anteriorly; length 2.04, width 1.84. Sternum: length 1.00, width 1.12; labium length 0.33, width 0.34. Clypeus with faint, dark marks under each anterior eye, height 0.12, width 0.79. Eyes: AE 0.60, PE 0.96, OQA 0.35, OQP 0.44, OQH 0.36, PLE 0.19, PME 0.18, ALE 0.10, AME 0.15, PLE-PME 0.18, PME-PME 0.08, ALE-AME 0.03, AME-AME 0.05. Chelicerae each with two indistinct dark longitudinal lines, one anterior and one lateral, three promarginal teeth, three retromarginal teeth equidistant with distal one largest. Legs, segment lengths: femur, patella-tibia, metatarsis, tarsus, total: I -3.08, 3.80, 3.16, 1.14, 11.18; II - missing; III - 1.70, 1.84, 1.50, 0.68, 5.72; IV - 2.60, 2.92, 2.98, 0.96, 9.44; tibial ventral macrosetae pairs: I-5, II-missing, III-3, IV-3. Pedipalpi pale with longitudinal dark lines. Externally, sides of the middle field (mf) of the female epigynal plate (Fig. 6) almost parallel, smoothly joined to epigynal plate; posteriorly forms middle portion of epigastric rim. Internally (Fig. 7), on each side are two spermathecae (s) and one dorsal, flat lamella, curved fertilization ducts (fd) arise posteriorly, curve and almost join medially then terminate anteriorly, while creating broad, thin dorso-lateral membranes (dm). Abdomen pale with dorsal, faint, longitudinal light lines anteriorly; sides and venter unmarked.

**Variation.**—Carapace lengths of three males are 2.12, 1.72, 1.72; average 1.85. Carapace lengths of three females are 2.04, 1.72, 1.52; average 1.76.

**Distribution.**—This species is found from Panama southward into southern Venezuela and northern Guyana.

**Remarks.**—Simon did not designate a holotype from the syntype series, however he described a female, therefore a female lectotype is selected here to provide taxonomic stability. The synonymy is based on the genitalia which show clearly that the two species are conspecific.

There are several localities in Venezuela with a place name of "San Esteban," so the locality of the type collection is assumed to be in the well-known historical area between Valencia and Puerto Cabello.

The label with the Panamanian specimen lists, "in brush near stream." One egg sac is in the type collection which is of typical trechaleid construction, i.e., composed of two valves with a "skirt" at the juncture. It is rather spherical with a diameter of 20 mm.

### *Dyrines huanuco* new species

Figs. 1, 8–11.

**Material examined.**—Holotype male, PERU: *Huanuco*: Divisoria (09°40'S, 076°05'W), 23 September–3 October 1946, F. Woytkowski (AMNH).

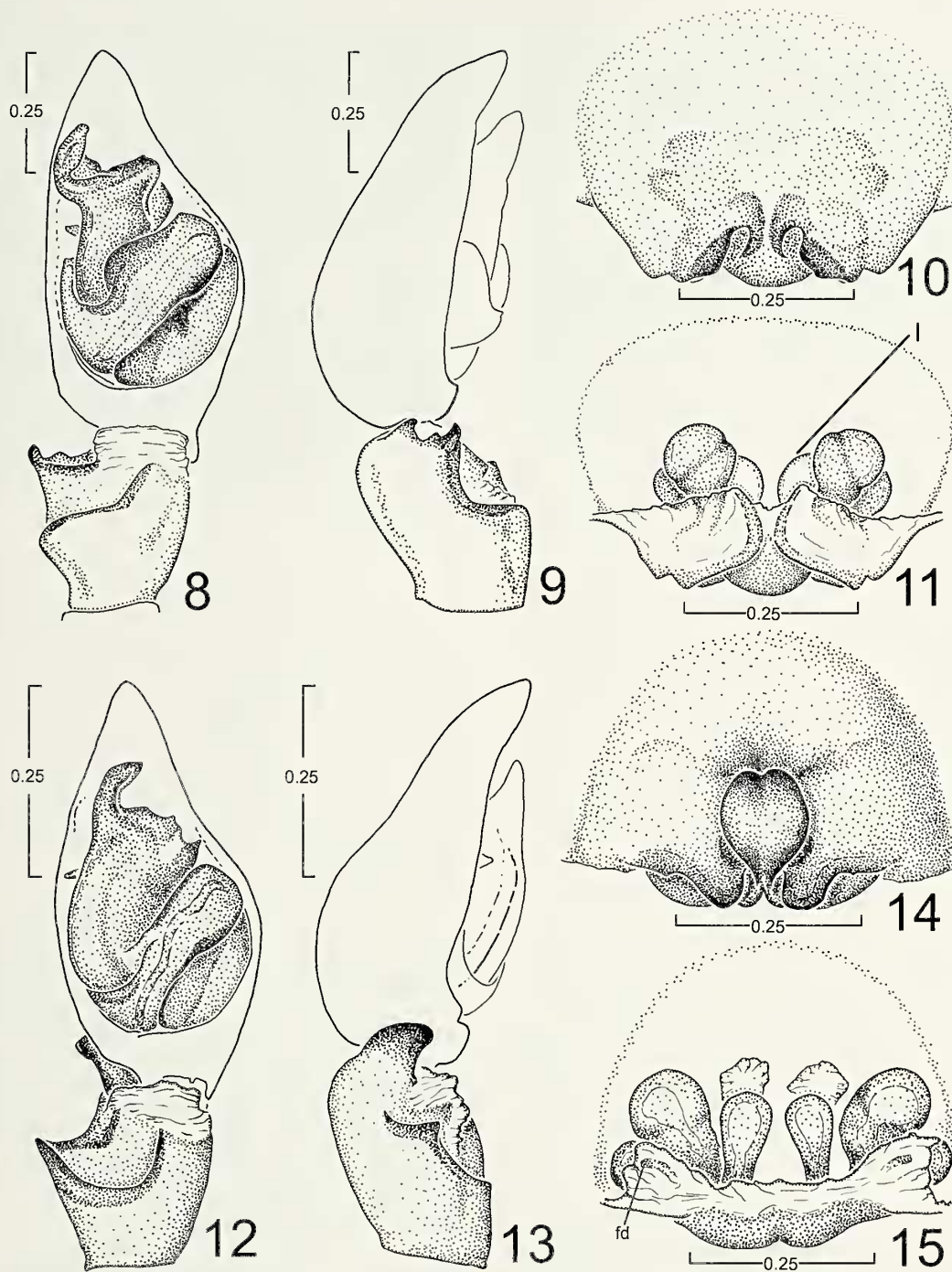
*Other material:* PERU: *Huanuco*: 1 ♀, Tingo Maria, Monson Valley (09°10'S, 076°00'W), 26 October 1954, E.E. Schlinger & E.S. Ross (CAS).

**Etymology.**—The name is a noun in apposition taken from the type locality, the state of Huanuco, Peru.

**Diagnosis.**—The median apophysis of the male differs from the *D. striatipes* in that it is spatulate and rounded apically, while the ental division of the retrolateral tibial apophysis is small, indistinct and acute, a character that it shares with *D. striatipes* (Fig. 5) but differs from *D. ducke* which has a large ental division (Fig. 13). Externally, the median division of the female epigynal plate differs from the other species by being narrowly connected to the remainder of the epigynal plate and by curved, antero-lateral ridges around the entrance through the epigynal plate, and forms the middle portion of the epigastric rim (Fig. 10). Internally, the curved fertilization ducts are only similar to that of *D. striatipes* (Fig. 7), but differ from *D. ducke* (Fig. 15), in that they form an arc arising near the posterior epigynal rim, curving and almost touching medially and continuing antero-laterally while creating broad, thin dorso-lateral membranes (Fig. 11).

**Description.**—*Holotype male:* Carapace pale with lateral, thin, light, longitudinal line each side, black around each eye, pencils of white setae directed anteriorly from eye region, length 1.90, width 1.60. Sternum: length 1.90, width 0.98; labium length 0.29, width 0.31. Clypeus with faint dark markings under each AE, height 0.08, width 0.67. Eyes: AE 0.56, PE 0.88, OQA 0.31, OQP 0.39, OQH 0.36, PLE 0.18, PME 0.16, ALE 0.08, AME 0.15, PLE-PME 0.17, PME-PME 0.10, ALE-AME 0.05, AME-AME 0.05. Chelicerae each with two dark longitudinal lines, one anterior and one lateral; anterior groove and lateral carina absent; three promarginal teeth, three retromarginal teeth equal size and equidistant. Legs, segment lengths: femur, patella-tibia, metatarsis, tarsus, total: I - 3.16, 4.10, 3.80, 1.20, 12.26; II - 2.20, 2.60, 2.24, 0.82, 7.86; III - 1.48, 1.70, 1.40, 0.60, 5.18; IV - 2.32, 2.54, 2.72, 0.82, 8.44; tibial ventral macrosetae pairs: I-5, II-4, III-2, IV-3. Pedipalpi pale with longitudinal dark lines. Abdomen pale with three anterior light, narrow, longitudinal lines with two lateral, one medial; sides with wide white marking; venter unmarked. Guide of median apophysis of male palpal bulb is spatulate (Figs. 8, 9); retrolateral tibial apophysis with ental division short and acute (Figs. 8, 9).

*Female (Peru, Tingo Maria, Monson Valley, Huanuco):* Carapace pale with lateral, thin, light, longitudinal line each side, black around each eye, length 2.00, width 1.84. Sternum: length 1.10, width 1.10; labium length 0.35, width 0.35. Clypeus with faint dark markings under each AE, height 0.10, width 0.81. Eyes: AE 0.59, PE 0.97, OQA 0.33, OQP 0.44, OQH 0.37, PLE 0.18, PME 0.17, ALE 0.09, AME 0.14, PLE-PME 0.12, PME-PME 0.14, ALE-AME 0.05, AME-AME 0.12. Chelicerae each with two dark longitudinal lines, one anterior and one lateral, three promarginal teeth, three retromarginal teeth equidistant and equal in size.



Figures 8-15.—Genitalia of species of *Dyrines*. 8-11. *D. huanuco*: 8. Right palpus, holotype male, ventral view; 9. Same, retrolateral view; 10. Female genitalia, allotype, ventral view; 11. Same, dorsal view. 12-15. *Dyrines ducke*: 12. Right palpus, holotype male, ventral view; 13. Same, retrolateral view; 14. Female genitalia, allotype, ventral view; 15. Same, dorsal view. Abbreviations: l, chitinous lamella inside the epigynal plate; fd, fertilization duct.

Legs, segment lengths: femur, patella-tibia, metatarsis, tarsus, total: I - 2.92, 3.70, 3.04, 1.06, 10.72; II - 2.26, 2.80, 2.20, 0.84, 8.10; III - 1.60, 1.80, 1.52, 0.66, 5.60; IV - 2.54, 2.70, 2.76, 0.90, 8.90; tibial ventral macrosetae pairs: I-4, II-5, III-2, IV-2. Pedipalpi pale with longitudinal dark lines. Abdomen pale, unmarked, damaged dorsally. Externally, the median division of the female epigynal plate is constricted anteriorly where there is a pit on each side partially

surrounded by a curved ridge, posteriorly forms middle portion of epigastric rim (Fig. 10). Internally, on each side there are two spermathecae and one dorsal, flat lamella, curved fertilization ducts arise posteriorly, curve and almost join medially then terminate anteriorly, while creating broad, thin dorso-lateral membranes (Fig. 11).

**Natural history.**—Nothing is known of the biology of this species.

*Dyrines ducke* new species

Figs. 1, 2, 12–15

**Material examined.**—Holotype male, BRAZIL: Amazonas: Reserva Florestal Adolfo Ducke, near Manaus (03°05'S, 060°00'W), 3 November 1991, S. Magni (MCTP). Allotype female, same data as holotype (MCTP). Paratype male, same data as holotype (MCTP).

**Etymology.**—The name is a noun in apposition based on the type locality, Reserva Florestal Adolfo Ducke.

**Diagnosis.**—The ental division of the retrolateral apophysis of the male differs from both other species by being very pronounced and blade-like (Figs. 2 *end*, 12, 13) and the length of the large median apophysis is greater than the length of the tibia (Fig. 12). Only the male of this species has on each basal cheliceral segment a groove above the fang and an adjacent lateral carina. Characters of the epigynum found only in this species include: ventrally, (1) the oval middle field of the epigynal plate is elevated and surrounded by a suture, and (2) dorsally, on each side, there are three conspicuous spermathecae and a posteriorly situated fertilization duct (Fig. 15).

**Description.**—*Holotype male*: Carapace pale with lateral, thin, light, longitudinal lines each side, additional longitudinal light lines anteriorly, black around each eye, pencils of anteriorly-directed white setae in the eye region, length 2.40, width 2.22. Sternum unmarked, length 1.15, width 1.20; labium length 0.43, width 0.43. Clypeus with faint dark markings under each AE, height 0.16, width 1.10. Eyes: AE 0.69, PE 1.10, OQA 0.36, OQP 0.48, OQH 0.43, PLE 0.23, PME 0.20, ALE 0.11, AME 0.16, PLE–PME 0.23, PME–PME 0.14, ALE–AME 0.06, AME–AME 0.10. Chelicerae unmarked, each basal segment with groove above each fang and lateral carina, three promarginal teeth, three retromarginal teeth, equidistant, proximal one smaller. Leg segment lengths: femur, patella-tibia, metatarsus, tarsus, total: I - 5.60, 7.34, 6.43, 1.84, 21.21; II - 3.56, 4.14, 3.40, 1.14, 12.24; III - 2.10, 3.32, 1.86, 0.74, 8.02; IV - 3.72, 4.00, missing; tibial ventral macrosetae pairs: I-4, II-4, III-1, IV-3. Pedipalpi with longitudinal dark lines. Abdomen pale on all sides, pair of light longitudinal lines dorsally. Median apophysis of male palpal bulb large, rounded retrolaterally, guide arises subapically and curves prolaterally; ental division of retrolateral tibial apophysis large, blade-like, curved ventrally (Figs. 12, 13).

*Allotype female*: Carapace pale with lateral, thin, light, longitudinal lines each side, additional longitudinal light lines anteriorly, black around each eye, length 2.30, width 2.10. Sternum unmarked, length 1.10, width 1.15; labium length 0.40, width 0.38. Clypeus dark under each anterior median eye, height 0.16, width 0.95. Eyes: AE 0.65, PE 1.10, OQA 0.35, OQP 0.49, OQH 0.43, PLE 0.20, PME 0.19, ALE 0.09, AME 0.14, PLE–PME 0.20, PME–PME 0.12, ALE–AME 0.06, AME–AME 0.07. Chelicerae unmarked, three promarginal teeth, three retromarginal teeth equidistant and equal size. Legs segment lengths: femur, patella-tibia, metatarsus, tarsus, total: I - 4.40, 4.84, 4.60, 1.40, 15.24; II - 3.12, 3.74, 2.92, 1.08, 10.86; III - 2.00, 2.10, 1.70, 0.72, 6.52; IV - 3.34, 3.66, 3.58, 1.20, 11.78; tibial ventral macrosetae pairs: I-4, II-3, III-1, IV-2. Pedipalpi pale with dorsal longitudinal dark lines. Abdomen pale, pattern indistinct due to integument separation. Epigynum (Fig. 14) ventrally with an oval middle

field surrounded by the epigynal plate; internally (Fig. 15) with three distinct spermathecae and one flat lamella each side.

**Natural history.**—Nothing is known of the biology of this species.

## OTHER SPECIES

*Dyrines taeniatus* (Mello-Leitão 1943a), nomen dubium

*Drances taeniatus* Mello-Leitão 1943a:159, fig. 5.

*Dyrines taeniatus* (Mello-Leitão) Simon 1903:1045. Platnick 2008.

**Material examined.**—Holotype spiderling, BRAZIL: Rio Grande do Sul: P. Rambo (MNRJ #059117).

**Remarks.**—The holotype of *D. taeniatus* is a very small immature specimen and its generic affiliation cannot be determined. Mello-Leitão stated that the specimen was a 3 mm female and, although the size agrees with the type specimen, the related figure does not agree and could be of a another specimen.

*Dyrines rubrosignatus* Mello-Leitão 1943b

*Dyrines rubrosignatus* Mello-Leitão 1943b:165. Platnick 2008.

**Material examined.**—Holotype spiderling, *Dyrines rubrosignatus* Mello-Leitão, BRAZIL: Paraíba, Campina Grande, R. von Ihering (MNRJ).

**Remarks.**—*Dyrines rubrosignatus* is transferred to the genus *Thaumasia* (Pisauridae), based on the typical dorsal pattern in most species of the latter genus, i.e., wide median dark area with lateral white bands, thus resulting in the new combination, *Thaumasia rubrosignata* (Mello-Leitão 1943b), NEW COMBINATION.

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